

parallel execution of the work at multiple sites. Sub-routes include selection nodes where site account managers assign work to manufacturing lines within a site. A single a priori route with combinations of 50 sites and 500 lines are too large to build and maintain. Envision the route 413 in Figure 4 with 50 nodes branching from node X and for each Y node, 10 site level branches, for a total of 500 potential sub-routes. The user combinations illustrated in each list for each node would be in the thousands and impossible to define in an a priori route. Recall that no one person knows the entire process and the composite route would require a large number of people to keep their portion up dated. In addition, each instance of an a priori compiled route of the entire process uses significant system resources while the dynamically constructed route requires only the sub-routes for that instance and the sub-routes are activated when selected which may be well after the start of the route. Also, the site key users change the sub-route for the site or line and these changes are reflected at the time of selection during execution not at the time of building the route.

The inventor acknowledges that sub-route linking for compiling routes BEFORE route execution is prior art but not the present invention that provides a route step for selection and dynamic inclusion of a sub-route during the execution of a route.

The user assignment screen 48 in Figure 4 illustrates dynamic route alteration by selecting the user of a route step from a list of potential users 49. The composite route 413 illustrates that the lists of potential users are tailored based on sub-route, site, and route step.

The inventor acknowledges that selecting a route step user from a list of potential route step users BEFORE route execution is prior art but not the present invention that provides for a route step for selecting a user for a subsequent route step during the execution of the route.

3) One of ordinary skill, given Figures 4 and 5 and the specification, could develop a program to implement the present invention including the selectable list of sub-routes and dynamic creation of routes. These description documents are as detailed as high level design specifications provided a program

development team of ordinary skill. The current implementation of the invention was based on these documents. Routes and sub-routes are frequently implemented as double linked lists in a relational database route table where a route step is represented in a table row, including the links, workflow step function, route ID, and user. A second table provides rows that cross-reference a selectable sub-route and route ID to a site or label and an optional selection criteria field. A third table provides rows with the current location of a workflow in its corresponding route. The sub-route selection screen 46 in Figure 4 provides a screen that presents the list from the second table for the user to select a site or label. For each selection by the user of screen 46, the code for the screen copies the selected sub-route in the route table, connects the links of the copied sub-route to the active route, also in the route table, and adds a row to the third table that starts the copied sub-route. The selection criteria disclosed in [0028]

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